

nica var. *glauca* Blake, a narrow-leaved plant with entire leaf margins which occupies a disjunct area in northwestern California and adjacent Oregon. The glabrous leaves of var. *intermedia* clearly distinguish this variety from the conspicuously pubescent *R. californica* var. *californica* of the Sierra Nevada.—ROBERT E. PERDUE, JR., U. S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE, CROPS RESEARCH DIVISION, BELTSVILLE, MD.

A POSTHUMOUS EDITION.¹—It is fortunate that the flora of Wisconsin is sufficiently similar to that of New England, so that this book is useful locally. It is just the sort of small publication that is most urgently needed for the use of plant taxonomists teaching courses in New England, or amateurs of all levels of competence. Here is a book that will introduce students and advanced amateurs to the plants they meet around them, without bringing in the welter of extra-limital plants which cause confusion in large manuals.

The book has a large number of botanically accurate line-drawn illustrations, which greatly simplify the problem of identification. The accuracy of the illustrations is a rather unique feature in such a small publication.

This book should be available to all students taking a taxonomy course. It serves as a very fine introduction to the important study and fine hobby of botanizing, and it shames those of us in New England who should have prepared such a book for our own area.—W. H. DRURY, JR., LINCOLN, MASS.

A NEW FLORA OF GREENLAND²

WHILE WAITING for the completion of the very slowly published North American Flora, several manuals of small parts of this continent have been worked out and published in recent years. Some are scientific floras of little interest to the non-specialist ranging up to the high quality characterizing the Flora of Alaska and Yukon by Hultén. Others are of the more popular type where scientific exactness is left out for the sake of simplicity. Only a few of the recent floras are, however, of the combined scientific and popular kind which can be used by amateurs and specialists alike and encourage an interest in botany more than other media are able to do. The Gray's Manual is of this type, and also the much too voluminous and expensive new Britton and Brown, but other regions not covered by these works still are waiting for a handy manual. Especially the arctic and subarctic parts of the con-

¹ *The Spring Flora of Wisconsin* by Norman C. Fassett, The University of Wisconsin Press, Madison, Wisconsin, 1957. v plus 189 pp.; price \$2.50.

² TYGE W. BÖCHER, KJELD HOLMEN, KNUD JAKOBSEN: Grönlands Flora. Med illustrationer af Ingeborg Frederiksen. P. Haase & Söns Forlag, København, 1957. 313 pp.

continent are helpless in this respect, since the scientific manuals of Polunin, Porsild, and the Danish botanists working in Greenland are useful only to the specialist.¹ The amateurs and occasional travellers, being much more numerous than the taxonomists and plant geographers, would be able to help considerably more in botanical exploration if such good and simple manuals were only available to them.

This is an appropriate occasion to welcome one such scientific and popular flora of an area of this continent perhaps better known botanically than the more heavily populated regions, despite its northern and isolated situation. One of the most-renowned specialists on the flora and vegetation of Greenland, Professor Tyge W. Böcher of Copenhagen, and two of his most able students, Kjeld Holmen and Knud Jakobsen, have put together the results of past explorations of Greenland in a very exemplary flora written in a popular style without losing scientific clarity. To add to the already high quality of the text, they had the assistance of Miss Ingeborg Frederiksen, an excellent botanical artist, to make informative and clear drawings of many of the critical taxa, some in color.

The Greenland flora is a textbook of botany on a small scale, since its first twenty pages give a concise review of the morphology of the plants to aid in understanding the descriptions. There is also information on the life-forms and distribution of the plants, the floristic provinces of Greenland, and the plant associations. Most of the book, however, is devoted to a detailed description of the almost 600 higher plants known to occur in Greenland, with particular information on their distribution inside the country and a sketchy mention of their range outside the region.

The general disposition of the Greenland flora is very much like the conventional European manuals. Every family can be determined by aid of a good general key, and it is also described briefly in its appropriate place. If a family includes more than a single genus in Greenland, a concise key makes it easy to separate these genera. Many genera are represented by one species only, but where more are present, the genus as a whole gets a short general description followed by a short key to the species. Every species is then described in fairly great detail in some few to a dozen lines, followed by the information on its distribution. If intraspecific variations are known from Greenland, these are mentioned, and so also are hybrids when occurring in the area. The nomenclature used is highly modern and synonyms are included whenever necessary.

In most cases the species concept is modern and narrow and clearly affected by the experimental works by the authors and other Scandinavians, and the generic delimitations are also highly critical. Thus, the genus *Torularia* is included in *Braya* on the basis of recent results from experiments, while *Harrimanella* is separated from *Cassiope* on similar

¹ This was written before the publication of the new Illustrated Flora of the Canadian Arctic Archipelago by A. E. Porsild, Nat. Mus. Canada Bull. 146. 1957.

evidence. But the consistency in the species concept is somewhat dim in places. For instance, *Epilobium arcticum* is separated from *E. davuricum*, *Saxifraga hyperborea* from *S. rivularis*, *S. tenuis* from *S. nivalis*, *Empetrum hermaphroditum* from *E. nigrum*, and *Stellaria longipes* is divided into six species. At the same time, *Saxifraga rosacea* is regarded as a subspecies only of *S. caespitosa*, *Myriophyllum exalbescens* is listed as a subspecies of *M. spicatum*, and *Salix callicarpaea* is given as a subspecies of *S. glauca*. Also, *Oxycoccus microcarpus* here is a subspecies of *O. quadripetalus*, *Vaccinium microphyllum* is taken as only a subspecies of *V. uliginosum*, and *Leucorchis straminea* is regarded as only a variety of *L. albida*. These are but a few examples of the inconsistency in species concept met with in the flora, but although this will not aid the user of the manual to get a clear concept of the species of the taxonomists, it does not decrease the usefulness of the book in any way since clear synonymy is always given and the names of intra-specific variations are included.

There is, however, one fact which considerably decreases the usefulness of this scientific and popular flora, perhaps the best available for any region in North America. Because most of the species—with the exception of the thirty-odd Greenland endemics—are also met with in the Canadian Eastern Arctic, the flora would have been very useful here, had it not been written in Danish. The excuse for this is mentioned in the foreword: it is intended mainly for the school-children in Greenland, the Danish ones as well as the Eskimos, although the latter will have to read it in a language perhaps more foreign to them than Danish is to an American. To simplify the reading for the Eskimos, there is one page written in their language and also a few plant names. And a one-page English guide and translation of the names of the floristic provinces and the frequency information is supposed to be enough to make the book useful also to English-speaking botanists. Certainly, plant geographers without knowledge of Danish will be able to get useful information from the book because of these translations, but had only the keys also been translated into English, the book would have become useful to all English-speaking travellers in Greenland and the Canadian Eastern Arctic. It is to be hoped that the authors will find it possible to translate their flora into English very soon, since it is without doubt the most valuable manual of arctic plants available to the western world.

The new Greenland flora, though not in English, is one of the books no botanist interested in the arctic regions can afford to be without. It certainly stands in the highest class of American botanical manuals and is a very worthy monument of the exemplary Danish exploration of Greenland which still is to be repeated elsewhere in the North American Arctic.—ÁSKELL LÖVE, INSTITUT BOTANIQUE DE L'UNIVERSITÉ DE MONTRÉAL, 4101 EST, RUE SHERBROOKE, MONTRÉAL 36.

Volume 59, number 706, including pages 245–272, was issued 15 November, 1957.